CURRICULUM VITAE

DOBRE CIPRIAN MIHAI

1. ***Data and birth place:*** 06.09.1979, Fagaras, Romania

2. ***Citizenship:*** Romanian

3. ***Marital status:*** Married

4. ***Studies and specializations:***
   - **2004–2008**: PhD student at the Automatic Controls and Computers Faculty (Computer Science department) from the University Politehnica of Bucharest. The subject of the thesis was "Advanced techniques for modeling and simulation of Grid systems". My PhD adviser was Prof. Valentin Cristea, PhD, Eng.
   - **2006, July-September**: OpenLab student at CERN, Switzerland, with results in optimizing large-scale high-speed data transfers.
   - **2003–2004**: Master of Science at the *Automatic Controls and Computers Faculty* (*Computer Science department*) from the University Politehnica of Bucharest. My dissertation thesis was focused on the Optimized data structures for PES implementations.
   - **1998-2003:** B. Sc. at the *Automatic Controls and Computers Faculty (Computer Science department)*, from the University Politehnica of Bucharest. The specialization that I chose was *System software* (with courses on O*perating Systems, Compilers, Databases, Parallel and Distributed Computing*). Other relevant courses: *Advanced Data Structures and Algorithms*, *Software Engineering, Digital Computers, Formal Languages and Automata, Computer Graphics, Artificial Intelligence, Computer Networks, Microprocessor Based Systems Design, Numerical Methods*.

5. ***Foreign language***
   - English: Reading skills: excellent, Writing skills: good, Verbal skills: good

6. ***Scientific titles***
   - Title of PhD in Computer Science (cum laude distinction) was obtained at University Politehnica of Bucharest (January, 2008)
   - Title of engineer was obtained at University Politehnica of Bucharest (2003).

7. ***Professional activity***
   - **October 2003 – present:** Teaching assistant at the Computers department in the Politehnica University of Bucharest, for the following courses: *Communication Protocols, Parallel Processing Algorithms, Computer network software, Instruments for Software Development, E-Commerce, Web Programming.*

8. ***Scientific Activity***
   - **Coordinator** for research activities in the "*CoLaboraror*" Laboratory, National Center of Informatics Technologies.
   - **Coordinator and trainer** for "*UPB GridInitiative Summer School*": 2nd Edition (2005), 3rd Edition (2006), 4th Edition (2008)
   - Scientific results obtained in the following domains:
     - Simulation of distributed systems: collaboration that resulted in the development of a simulator for distributed systems (MONARC 2).
     - Algorithms and data structures: development of advanced PED structures that were used for optimizing a simulator for distributed systems (MONARC 2), and the development of automatic software agents (LISA).
     - Communication protocols: development of a monitoring framework composed of localhost agents (LISA); collaboration to the development of a monitoring and control framework for large scale distributed systems (MonALISA).
   - **Researcher** in the teams of over 10 research grants in the field of Distributed System and Grid Computing. The last relevant grants are:

- **EquiPoly:** creating a modern R&D infrastructure for advanced Grid computing and a test-bed for various technologies, project funded by the IBM in the Equinox Scholar Program (http://cs.pub.ro/~equinox).
- **EU-NCIT:** NCIT leading to EU IST Excellency (project funded by the European Commission in FP6, https://euncit.hpc.pub.ro). This project aims to enhance the participation of the Center in European research. *My contribution* in this project was focused on training of researchers of the NCIT, guidelines to increase the successful participation of NCIT to further EU project calls.
- **SEE-GRID-II:** South-Eastern European Grid-enabled e-Infrastructure Development (project funded by the European Commission in FP6). SEE-GRID intends to provide specific support actions to pave the way towards the participation of the SE European countries to the Pan-European and worldwide Grid initiatives. *My contribution* was to design a guide to implementing Grid applications using various tools, as well as set of guides to developing applications using MPI.
- **EGEE-II:** Enabling Grids for E-sciencE, coordinated by ICI (project funded by the European Commission in FP6). The Enabling Grids for E-sciencE project brings together scientists and engineers from more than 90 institutions in 32 countries world-wide to provide a seamless Grid infrastructure for e-Science that is available to scientists. *My contribution* in this project was oriented to the training sessions.
- **MonALISA:** monitoring framework (http://monalisa.caltech.edu), written in Java, part of the collaboration of our university with CERN (European Organization for Nuclear Research) and California Institute of Technology. *My contributions* at the project: development of the central framework for collecting data, controlling modules for automatic user-defined actions, the GUI of the application with interfaces for the visualization and interpreting the data, high performance networking control modules using optical switches, various modules for collecting data.
- **LISA:** a lightweight monitoring framework (http://monalisa.cacr.caltech.edu/lisa), written in Java, part of the collaboration between our university and CERN (European Organization for Nuclear Research) and California Institute of Technology. The application is based on a set of agents that collect data, as well as a central point of access for the user. *My contribution* was in developing the entire framework.
- **FDT:** an application for fast data transfer of large sets of data (http://monalisa.caltech.edu/fdt), written in Java, part of the collaboration between our university and CERN (European Organization for Nuclear Research) and California Institute of Technology. *My contributions* to this applications were: development of a user interface, a controlling module for the application.
- **MONARC 2:** a modeling and simulation tool (http://monarc.cacr.caltech.edu), written in Java, part of the collaboration of our university with CERN (European Organization for Nuclear Research) and California Institute of Technology. The simulator is designed to model a wide variety of distributed systems technology, from data transfers to scheduling and replication, being the most generic instrument for distributed systems existing today. *My contributions* to the project were: development of the modeling engine, as well as the job model, data model, network model, output model, development of a wide range of experiments that provided valuable results to the scientific community, presented during various events.

9. Awards & Grants

- **2008**: Innovations in Networking Award for Experimental/Development Applications presented by the Corporation for Education Network Initiatives (CENIC) in California, in recognition of outstanding contribution in making possible the Ultralight project.
- **2007: Oracle Award.** PhD Performance Scholarship for three years.
- **2003-2008:** Caltech PhD Performance Scholarship.
- **2006**: Innovations in Networking Award during the CENIC 2006 conference for High Performance Applications.
- **2006, 2007**: World-wide record for data transferring at SuperComputing Bandwidth Challenge event, where FDT was used for data transferring and LISA as the control application.
- **2003:** First prize at the Students Scientific Conference from the University Politehnica of Bucharest (the *Internet Systems and Applications* section).

10. The most relevant papers published in prestigious scientific magazines and conference volumes:

1. "*Genetic Algorithm for DAG Scheduling in Grid Environments*", Florin Pop, Ciprian Dobre, Valentin Cristea (ICCP'09, Cluj-Napoca, Romania, August 2009).
2. "*Towards Scalable Simulation of Large Scale Distributed Systems*", Ciprian Dobre, Florin Pop, Valentin Cristea (HETGP'09, Indianapolis, US, August 2009).
3. "*A Distributed Service for On-Demand End-to-End Optical Circuits*", Ramiro Voicu, Nicolae Tapus, Iosif Legrand, Harvey Newman, Ciprian Dobre (CSCS'17, Bucharest, Romania, July, 2009).
4. "*Models and Techniques for Ensuring Reliability, Safety, Availability and Security of Large Scale Distributed Systems*", Valentin Cristea, Ciprian Dobre, Florin Pop, Corina Stratan, Alexandru Costan, Catalin Leordeanu, Eliana Tirsa (CSCS'17, Bucharest, Romania, July 2009).
5. "*DistHash: A robust P2P DHT-based system for replicated objects*", Ciprian Dobre, Florin Pop, Valentin Cristea (CSCS'17, Bucharest, Romania, July 2009).
6. "*Realistic simulation of large scale distributed systems using monitoring*", Ciprian Dobre, Corina Stratan, Valentin Cristea (ISPDC'08, Krakow, Poland, July 2008).
7. "*Performance Analysis of Grid DAG Scheduling Algorithms using MONARC Simulation Tools*", Florin Pop, Ciprian Dobre, Valentin Cristea (ISPDC'08, Krakow, Poland, July 2008).
8. "*A Monitoring Architecture for High-speed networks in Large Scale Distributed Collaborations*", Alexandru Costan, Ciprian Dobre, Valentin Cristea, Ramiro Voicu (ISPDC'08, Krakow, Poland, July 2008).
9. "*A Simulation Model for Large Scale Distributed Systems*", Ciprian M. Dobre, Valentin Cristea (the 4th International Conference on Innovations in Information Technology, Dubai, United Arab Emirates, November 2007).
10. "*Efficient, Large Scale Data Transfers in Wide Area Network*", Iosif C. Legrand, Harvey Newman, Ramiro Voicu, Ciprian Dobre (Computing for High Energy Physics, Victoria BC, Canada, September 2-7, 2007).
11. "*VINCI : Virtual Intelligent Networks for Computing Infrastructures*", Iosif C. Legrand, Harvey Newman, Ramiro Voicu, Ciprian Dobre (Computing for High Energy Physics, Victoria BC, Canada, September 2-7, 2007).
12. "*An Agent Based Framework to Monitor and Control High Performance Data Transfers*", Ciprian M. Dobre, Ramiro Voicu, Adrian Muraru, Iosif C. Legrand (the IEEE Region 8 EUROCON 2007 (ISI), Warsaw, Poland, September 2007, ISBN 1-4244-0813-1).
13. "*A Distributed Agent Based System to Control and Coordinate Large Scale Data Transfers*", Ciprian Dobre, Ramiro Voicu, Adrian Muraru, Iosif C. Legrand (the 16th International Conference on Control Systems and Computer Science, Mai 2007, Bucharest, Romania, ISBN: 978-973-718-741-3, ISBN: 978-973-718-742-0).
14. "*A Simulation Model for Grid Scheduling Analysis and Optimization*", Florin Pop, Ciprian M. Dobre, Gavril Godza, Valentin Cristea (PARELEC Conference, Bialzstok, Poland, September, 2006, pp. 133-138, ISBN: 0-7695-2554-7).
15. "*VINCI : Virtual Intelligent Networks for Computing Infrastructures*", Iosif C. Legrand, Catalin Cirstoiu, Sean McKee, Harvey Newman, Ramiro Voicu, Ciprian Dobre (Computing for High Energy Physics, Mumbai, India, February 2006).
16. "*MonALISA : A Distributed Service for Monitoring, Control and Global Optimization*", Iosif C. Legrand, Harvey Newman, Ramiro Voicu, Catalin Cirstoiu, Ciprian Dobre, Costin Grigoras, Lucian Musat, Adrian Muraru, Mihaela Toarta, Alexandru Costan (Computing for High Energy Physics, Mumbai, India, February, 2006).
17. "*A Simulation Study for T0/T1 Data Replication and Production Activities*", Iosif C. Legrand, Ciprian Mihai Dobre, Ramiro Voicu, Corina Stratan, Catalin Cirstoiu, Lucian Musat (Proc. of the 15th International Conference on Control Systems and Computer Science, Ed. Politehnica Press, Bucharest, Romania, 2005, pp. 131-135, ISBN: 973-8449-89-8, ISBN: 973-8449-91-x).
18. „*MonALISA: An Agent based, Dynamic Service System to Monitor, Control and Optimize Grid based Applications*", Iosif C. Legrand, Harvey Newman, Ramiro Voicu, Catalin Cirstoiu, Costin Grigoras, Ciprian Dobre (Proc. of Computing in High Energy and Nuclear Physics CHEP'04 , Interlaken, Switzerland, 2004).
19. „*A Processes Oriented, Discrete Event Simulation Framework for Modelling and Design of Large Scale Distributed Systems*", Iosif C. Legrand, Harvey Newman, Frank van Lingen, Ciprian Mihai Dobre, Corina Stratan, Kathreen Paschen (Proc. of the IX International

Workshop on Advanced Computing and Analysis Techniques in Physics Research, Tsukuba, Japan, December, 2003).

20. "*Incorporating Monitor Data and Dependencies of Processes within Models for the CMS DC04 using the MONARC simulation framework and extensions*", Frank van Lingen, Kathreen Paschen, Iosif C. Legrand, Ciprian Dobre, Corina Stratan (the IX International Workshop on Advanced Computing and Analysis Techniques in Physics Research, Tsukuba, Japan, December, 2003).